

## COMPUTER-AIDED NUCLEIC ACID SEQUENCING

### ABSTRACT OF THE DISCLOSURE

A computer system for sequencing nucleic acids is provided. The computer system may be used for de novo sequencing of a nucleic acid sequence by analyzing the fluorescence intensities of hybridized nucleic acid probes on biological chips. The probes with the highest intensities are utilized to sequence the nucleic acid and related probes are analyzed to increase the accuracy of nucleic acid sequencing. The sequence of the nucleic acid sequence may be determined from hybridization intensities that do not allow identification of perfectly complementary probes.